NEW AND INTERESTING SPECIES OF DERMESTIDAE
(Coleoptera)

VLADIMIR KALIK
Pardubice, Czechoslovakia

Through the kindness of H. B. Leech and E. C. Van Dyke, I have been able to study some of the Dermestidae from the collection of the California Academy of Sciences, San Francisco. Many interesting species were found, and several of them are treated in the following article.

Dermestes reductus Kalik, new species

Form and color: Oblong, relatively narrow, moderately convex. Prothorax rather flat, broadest in the posterior third, narrowing more to the front, slightly to the base. Elytra as broad as the prothorax, with subparallel sides narrowing gradually in the posterior third. Dorsal surface and under side black. Antennae of 11 segments, reddish brown, with red club. Tarsi brown. *Pubescence:* Upper surface clothed with black and grayish-white hairs. Grayish-white hairs covering almost the whole head, forming several spots on the anterior and posterior margins and one spot on either side of the pronotum; a sparse but long pubescence covers the basal margin and posterior angles of the pronotum; the grayish-white hairs form a broad transverse band on the basal two-fifths of the elytra. This band encloses on each elytron a basal, oval, black spot not reaching either the shoulder or the scutellum; the black hairs form three distinct spots almost in the middle of the band, as in *D. lardarius* Linnaeus. Scutellum with black pubescence. Undersurface covered with predominantly grayish-white hairs; on the legs and ventral segments they are mixed with brown hairs, which predominate especially on the last two to three segments of the abdomen. *Punctation:* Surface closely punctured, those on the pronotum close together, the distance between them smaller than the diameter of one puncture; elytral punctation slightly sparser; under side finely and relatively sparsely punctured. *Sexual characters:* The male has a small fovea with a brush of yellow hairs on the median line of each of the 3rd and 4th abdominal sternites. Aedeagus small, curved, widest at the base, narrower at the middle, broadening again towards the tip; parameres approximately as long as the aedeagus, almost of the same width in their whole length, narrowing only at the tip. *Lengths* of four ♂♂ 6.2, 6.5, 6.5 and 6.5 mm. respectively; of four ♀♀ 6.0, 6.2, 6.2, 6.2 mm. Widths, 2.2, 2.2, 2.5, 2.3 mm. for the ♂♂; 2.0, 2.2, 2.3, 2.2 for the ♀♀.

Holotype ♂, and *allotype* ♀, from DUPARQUET, QUEBEC, CANADA, 27. V. 1940 and 26. IX. 1934, G. Stace Smith, collector; in the California Academy of Sciences. *Paratypes:* a pair from the type locality, 11, XI. 1934, under bark *Populus*, in Kalik collection; ♂, ♀ from Canada, in coll. Museum Prague; ♂, ♀, from Canada, in Kalik collection.

Compartive notes: Lepesme (1950:65) described *Dermestes*

lardarius, ab. *reductus* as follows: "Je donne le nom de reductus à des exemplaires de petite taille (moins de 6 mm.) à pubescence claire des élytres particulièrement blanche; je n'ai observé cette forme que d'Amérique du Nord." Notwithstanding the brief statements of the description I believe that my specimens are identical with the type which the author obtained from Mr. J. Mitchel and returned to him. At present the type is not accessible to me, and I therefore cannot fully confirm my opinion, but in any case I consider the specimens described by me as of specific status for the following reasons:

(a) According to G. Stace Smith and H. B. Leech, who have both collected living specimens, *D. reductus* is a species of wooded areas, away from human habitations. Of the Quebec examples, one was found on fresh lumber, one under the bark of *Abies* sp., and two under the bark of *Populus* sp. Typical *D. reductus* has also been collected in British Columbia at Creston, 18. X. 1931 (G. Stace Smith), Salmon Arm (under the bark of an old Douglas fir log—H.B.L.), and Vernon (Ralph Hopping). *D. lardarius* is a species predominantly bound to food and material worked by man.

(b) The range in size of the eight type specimens of *D. reductus*, as mentioned in the description, is 6 to 6.5 mm. In most examples of *D. lardarius* the size is 7 to 8.5 mm. The relation of the numbers of specimens of different sizes among the 89 *D. lardarius* at present at my disposal from different localities, is given in the graph (fig. 3). It is evident that a size of less than 7 mm. is quite exceptional and extreme (apparently starvation forms). In three specimens from North America the length is 8.0, 8.5, and 9.0 respectively.

(c) The whole beetle is black, even the elytra under the transverse band of gray hairs, whereas in *D. lardarius* this area is red to brown. The dark spot at the base of each elytron is not divided into two smaller spots by gray hairs, as it is in *D. lardarius*.

(d) The sides of the elytra are relatively more parallel, the lateral margins of the prothorax less raised, the body flatter, than in *D. lardarius*.

(e) The posterior margins of the abdominal segments are interruptedly gray and brown pubescent; in *D. lardarius* the whole segments are unicolored gray, brown or black.

(f) In *D. reductus* the aedeagus narrows in the middle (fig. 1), whereas in *D. lardarius* it is of almost equal width for its whole

length (fig. 2). I have not yet had a sufficient number of males of the the new species, and so have only been able to compare the shape of the aedeagus in two specimens. Thus it will be necessary to convince ourselves of the constancy of this feature by examining a greater number of males.

Fig. 1. Aedeagus of *Dermestes reductus* Kalik, new species. Fig. 2. Aedeagus of *Dermestes lardarius* Linnaeus.

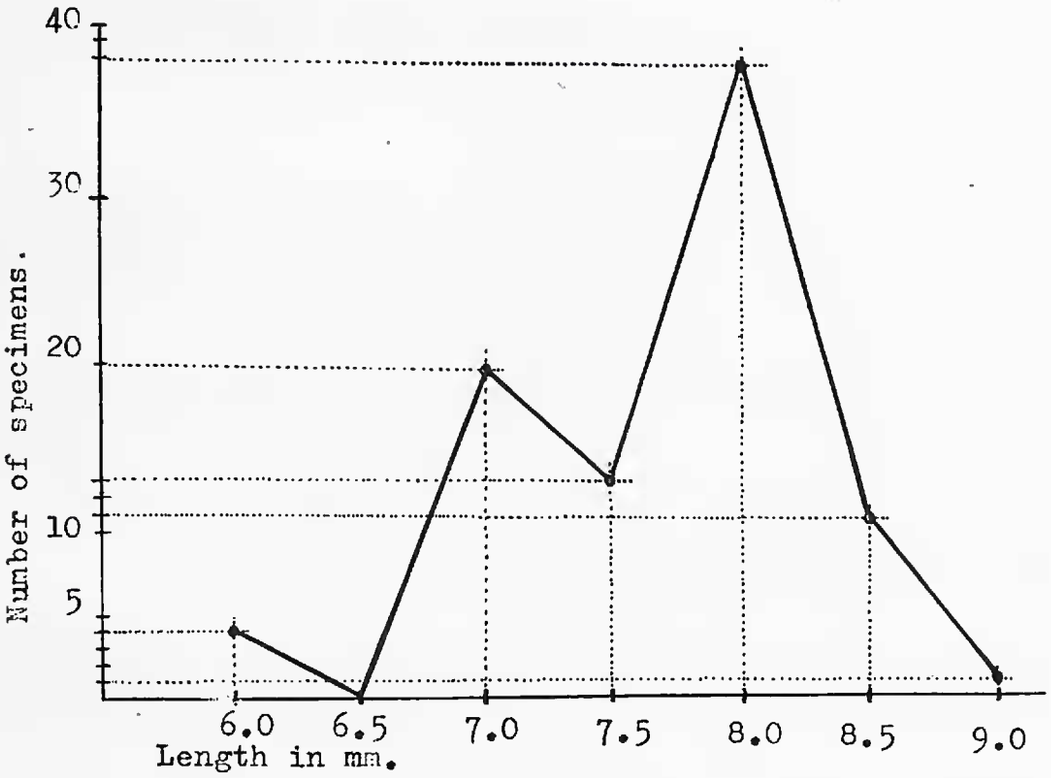

Fig. 3. Graph showing relation between sizes of specimens and number of specimens of *Dermestes lardarius* Linnaeus.

Dermestes leechi Kalik, new species

Form and color: Oblong, moderately convex, brownish-black. Eyes fairly large. Pronotum broadest in posterior third, strongly narrowing towards the anterior end, of semicircular shape in dorsal view, moderately narrowed basally, anterior angles invisible from above, posterior angles rounded. Scutellum cordate. Elytra subcylindrical, with sub-parallel sides which narrow only in the posterior quarter. Antennae of 11 segments, reddish-brown, club 3-segmented, inserted almost in the middle of the funicle; 8th segment short, transverse.

Punctation: Above rather coarsely punctured, punctures on disk of pronotum separated by approximately their own diameters. Abdomen more finely but fairly closely punctured. *Pubescence:* Upper surface covered uniformly

but not too densely with a short grayish-yellow pubescence, that of under surface similar but much denser. *Sexual characters:* Third and 4th abdominal segments of male each with one circular fovea with a brush of hairs. Aedeagus very short, slightly curved, of almost the same width throughout. Parameres about a fourth longer than the aedeagus, of equal width throughout, narrowing only at the apices which are bordered with yellow hairs. *Length* of ♂ and ♀: 7.5 to 8.0 mm.; width 2.2 to 2.5 mm.

Holotype ♂, and allotype ♀, from BHADRAVATI, TANJORE DISTRICT, southern INDIA, in collection of Museum Prague. *Paratypes*, all topotypical; ♂, 2 ♀ ♀, in collection of Museum Prague; 1 ♀ in the California Academy of Sciences, San Francisco; 2 ♂ ♂, 1 ♀ in Kalik collection.

Compartive notes: This species resembles by the uniformity of its pubescence *D. peruvianus* Castelnau and *D. nidum* Arrow. It is distinguished from the former mainly by the fact that it is smaller, that the male has a fovea on both the 4th and 5th abdominal sternites, that the pronotum is more convex, its anterior angles not flat and not visible from above. It is distinguished from *nidum* by the elytra being without trace of striae, by its smaller size, and by its more convex pronotum. I am pleased to name this species in honor of Mr. Hugh B. Leech of the California Academy of Sciences, San Francisco.

DERMESTES UNICOLOR Lepesme

In the material from the California Academy of Sciences I found six specimens of Dermestes from San Roque, Baja California, 2.8. 1922, which I regarded originally as a variety of *D. carnivorus* F. It is, however, possible that these specimens represent Lepesme's species *D. unicolor*, whose type in the Museum in Paris I had no opportunity to examine. Lepesme's description (1950:57) runs as follows:

"*D. unicolor* n. sp. Long.: 7-8 mm.—Très voisin du précédent [*carnivorus* F.], plus convexe. Brun noir, uniformément couvert à la face dorsale d'une pubescence blonde peu épaisse régulièrement couchée en arrière, aussi bien sur le pronotum que sur les èlytres. Face sternale garnie de pubescence blanche, exception faite seulement d'une tache triangulair à l'angle antéro-latéral des cinq sternites abdominaux apparents. Dispersion géographique.—Antilles (Muséum de Paris)."

The specimens, of which two are now in my collection, very much resemble *D. carnivorus*. Some have quite black elytra, others are slightly brown on the shoulders; the whole surface is uniformly grayish yellow pubescent, only the sides of the pronotum having

white hairs directed from the side inwards. This white pubescence of the sides of the pronotum does not, however, stand out strikingly from the general, light pubescence of the surface. The underside of the body has the pubescence as in *D. carnivorus*. The aedeagus of the male is very similar to that of *D. carnivorus*, which has perhaps a slightly narrower tip. According to my examples I believe that they represented a form of *D. carnivorus*. Only after a comparison with Lepesme's type I shall be able to confirm my opinion that the cited examples are actually identical with *D. unicolor*. To be sure that this species is only a form of *D. carnivorus*, I am in need of more material for comparison. Until that time I shall take Lepesme's identification as for that of an independent species.

Dermestes sobrinus Leconte

I have in my collection one female specimen of Dermestes from Cuba, which I regard as belonging to this species according to Reitter's remarks in 1879 (p. 28) "Diese Art ist dem *carnivorus* sehr nahe verwandt und ist an den ganz dunklen Seitenstücken der Hinterbrust leicht zu erkennen." This character is not mentioned at all in the original description by Leconte (1854: 108). Though the underside of my specimen is in part worn, I ascertained at the posterior margin of the sternites of the abdomen brown spots, which might correspond to the feature in the original description: "abdomine maculis nigris quadruplici serie ornato." The femora have small spots with white hairs. On the whole this species is very similar to *D. carnivorus* or *unicolor* Lepesme, uniformly grayish yellow pubescent on the upper surface, only the epipleurae and sides of the prothorax narrowly grayish white, on the shoulder a small spot of yellow hairs. The whole metasterna densely covered with brown pubescence.

Thaumaglossa rufomaculata Pic

I found five specimens of this beautiful and characteristically colored beetle in the material of the California Academy of Sciences: 1 female from Nanking, China, V. 3. 1923, and 4 ♀ ♀ from Alabang, Philippine Islands, Luzon Isl., XI. 9. 30, collection of E. C. Van Dyke. The British Museum has the type of *T. rufomaculata* Pic (described as an *Aethriostoma* in 1938: 12 from Kuala Lumpur) marked as conspecific with *T. laeta* Arrow, 1915: 435, whose type is also in the British Museum. I sent one of my specimens for comparison to London. Mrs. H. Cook kindly informed me

that all three specimens, both types and the example I had sent, seem to be completely identical except for the shape of the red spot on the discus of each elytron. According to Mrs. Cook's drawings the spot is round in *Thaumaglossa (Aethriostoma) rufomaculata* Pic, of irregular shape and probably on the anterior side with worn hairs as shown in the figure in *T. laeta* Arrow. In one of my specimens the spot is completely round, in the others partly irregular. This irregularity is due to the fact that the red pubescence covering the red spot on each elytron is worn in some specimens, and thus the light coloring of this spot is not clear at the margin and partly fuses with the dark neighborhood. Until I am able to re-examine the conspecifity of the two species with conclusive validity I retain for my specimens the designation *T. rufomaculata,* as according to the shape of the spot they are closer to this type. If the two species should prove conspecific. Arrow's name will be valid.

Matsumura & Yokoyama described (1928: 53-4) from Formosa *Orphilus bimaculatus*. As in the description they speak distinctly of the surface as being covered by pubescence, their species cannot be a representative of the genus *Orphilus* whose species are bare; according to the diagnosis: "Elytra with a large reddish circular spot on its back, closely punctured and furnished with black (in general part) and reddish hairs (on the spot)," it is most probably again *T. rufomaculata (laeta?)*. If the two suppositions on the conspecifity of the species mentioned should be confirmed, the synonymy would be as follows: 1915, *Thaumaglossa laeta* Arrow. 1928. *Orphilus bimaculatus* Matsumura & Yokoyama. 1938. *Aethriostoma rufomaculata* Pic.

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